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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* WILLIAM C. Y. LEE and JAU YOUNG LEE

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Appeal 2009-001070  
Application 09/625,626  
Technology Center 2600

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Decided:<sup>1</sup> July 13, 2009

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Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,  
and THOMAS S. HAHN, *Administrative Patent Judges*.

HAHN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejections of claims 1-10, 12-25, and 27-30. We have jurisdiction under 35 U.S.C. § 6(b). We affirm-in-part.

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

## STATEMENT OF THE CASE

Appellants claim a method and system invention for operating a wireless communications network by (1) collecting and analyzing information, such as locations of mobile transceivers; and (2) using the analyzed information to determine where to point radio beams for communicating with the mobile transceivers.<sup>2</sup> Claim 1 is illustrative:

1. A method for operating a wireless network, comprising:

(a) collecting and analyzing information from the wireless network into a collection and analysis system coupled to the wireless network, wherein the information includes location information on a plurality of mobile transceivers communicating with the wireless network; and

(b) optimizing the wireless network's operation from a network control system coupled to the wireless network by intelligently steering radio frequency (RF) signal beams transmitted from the wireless network in the direction of one or more of the plurality of mobile transceivers using the collected and analyzed information.

The Examiner relies on the following prior art references to show unpatentability:

Tayloe	US 5,095,500	Mar. 10, 1992
Borras	US 5,303,240	Apr. 12, 1994
Grimes	US 5,479,482	Dec. 26, 1995

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<sup>2</sup> See generally Spec. 2:15 – 3:8; 4:21 – 6:3, 8:19; 14:11 – 15:14; Figs. 1, 2A, and 6.

1. The Examiner rejected claims 1, 3-10, 12-16, 18-25, and 27-30 under 35 U.S.C. § 103(a) as unpatentable over Tayloe and Borrás (Ans. 3-7).
2. The Examiner rejected claims 2 and 17 under 35 U.S.C. § 103(a) as unpatentable over Tayloe, Borrás, and Grimes (Ans. 8).

Rather than repeat the arguments of Appellants or of the Examiner, we refer to the Briefs and the Answer<sup>3</sup> for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments that Appellants could have made but did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

#### *Appellants' Arguments*

Appellants collectively argue appealed independent claims 1 and 16 (App. Br. 6-11; Reply Br. 2-5), with the assertion that Tayloe and Borrás fail to teach the claim 1 recited “collecting and analyzing information from the wireless network . . . ,” and “optimizing the wireless network’s operation . . . by intelligently steering . . . signal beams . . . in the direction of one or more of the plurality of mobile transceivers . . .” (App. Br. 6). Appellants also contend that the motivation for combining these references is hindsight as set out in the Office Action rather than the references themselves (App. Br. 11).

Appellants continue with arguments that: (1) Borrás is deficient as to use of threshold triggers for collecting information as recited in claims 4 and 19 (App. Br. 11); (2) Tayloe refers to commanding a mobile unit to vary its

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<sup>3</sup> We refer throughout this opinion to (1) the Appeal Brief filed Oct. 22, 2007, (2) the Examiner’s Answer mailed Jan. 29, 2008, and (3) the Reply Brief filed Mar. 28, 2008.

transmission power but is deficient as to dynamically varying base station power as recited in claims 5 and 20 (App. Br. 12); (3) Tayloe refers to increasing base station transmitter power to increase cell areas but is deficient as to dynamically assigning base station power to cells, sectors within cells, and mobile transceivers as recited in claims 6 and 21 (*Id.*); (4) Borrás is deficient as to setting dynamic dedicated handoff thresholds for individual transceivers as recited in claims 7 and 22 (*Id.*); (5) Borrás is deficient as to setting unique handoff thresholds for each transceiver as recited in claims 8 and 23 (App. Br. 12, 13); and (6) Borrás is deficient as to performing handoffs for individual mobile transceivers based on their assigned handoff thresholds as recited in claims 9 and 24 (App. Br. 13).

With respect to dependent claims 10, 12-15, 25, and 27-30, Appellants argue that they “stand or fall with” base claims (App. Br. 13, 14; Reply Br. 7, 8).

Then with respect to appealed dependent claims 2 and 17, Appellants assert that the respective base independent claims 1 and 16 are patentable over Tayloe, Borrás, and Grimes, because “Grimes fails to overcome the deficiencies of Tayloe and Borrás” (App. Br. 11, 14, 15).

## ISSUES

1. Under § 103, have Appellants shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches steering directional antennas to optimize transmission of signals by using collected and analyzed information, including mobile transceiver location information, in rejecting claims 1 and 16?

2. Under § 103, have Appellants shown that the Examiner has not provided reasoning to combine Tayloe and Borrás in rejecting claims 1 and 16?
3. Under § 103, have Appellants shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches: (i) use of threshold triggers for collecting information in rejecting claims 4 and 19; (ii) dynamic allocation of transmitted base station signal power in rejecting claims 5 and 20; (iii) dynamic assignment of transmitted base station signal power to cells, sectors within cells, and mobile transceivers in rejecting claims 6 and 21; (iv) setting dynamic dedicated handoff thresholds for individual mobile transceivers in rejecting claims 7 and 22; (v) setting unique handoff thresholds for each mobile transceiver in rejecting claims 8 and 23; and (vi) performing handoffs based on assigned unique handoff thresholds and locations for individual mobile transceivers in rejecting claims 9 and 24?
4. Under § 103, have Appellants shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches the claimed subject matter of base independent claims 1 and 16, and if the combined references fail to teach claimed subject matter that Grimes is deficient in overcoming Tayloe and Borrás deficiencies in rejecting dependent claims 2 and 17?

### FINDINGS OF FACT

The record supports the following Findings of Fact (FF) by a preponderance of the evidence:

#### *Tayloe*

1. Tayloe discloses a network communications system and method for servicing and evaluating coverage of a geographic area using a plurality of base stations servicing a plurality of mobile units, e.g., cellular telephones. The location and a measured signal quality for a mobile unit are determined and sent to an Operation Maintenance and Control Unit (OMCU) where an operator uses the collated information to vary system parameters, such as transmitter power, transmitter frequency, frequency assignments, or software algorithms. Abstract; Col. 5, ll. 25-39.
2. Tayloe discloses that increasing transmitter power at a base station increases cell coverage area boundaries. Col. 6, ll. 12-15.

#### *Borras*

3. Borras discloses a telecommunications system that uses a base station directional antenna for transmitting signals to a portable communication two way radio unit. The Borras system determines received signal quality to select a best direction for transmitting signals. Col. 2, ll. 13-24; col. 4, l. 49 - col. 5, l. 3.
4. Borras discloses that when base stations transmit in a consistent cell pattern the portable communication units control handoffs between intra-cells or inter-cells by measuring signal quality. Col. 5, ll. 4-12.

5. Borrás further discloses that instead of having portable communication units control handoffs, the base stations can control handoffs by sweeping directional antennas and measuring resulting signal quality to optimize directional antenna steering. Col. 5 ll. 12-25.

### PRINCIPLES OF LAW

It is incumbent upon the Examiner, in rejecting claims under 35 U.S.C. § 103, to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073-74 (Fed. Cir. 1988). To do so the Examiner must make factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (stating that 35 U.S.C. § 103 leads to three basic factual inquiries: the scope and content of the prior art, the differences between the prior art and the claims at issue, and the level of ordinary skill in the art). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore,

“there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness” . . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.

*KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).



Determining obviousness depends on combined reference teachings. Accordingly, one can not show nonobviousness by individually attacking references that are combined for rejecting a claim. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981).

## ANALYSIS

### *Obviousness Rejection over Tayloe and Borrás*

#### *Claims 1 and 16*

Based on the record, we find no error in the Examiner's rejection of representative claim 1.<sup>4</sup>

The Examiner finds Tayloe teaching a wireless communications network system that collects and analyzes location information for multiple mobile transceivers (Ans. 3, 4). We also find that Tayloe amply teaches use of a network communications system having a plurality of base stations servicing a plurality of mobile units, and further teaches determining locations for the mobile units and determining signal qualities for adjusting operation of the network, including transmitter power (FF 1).

The Examiner, however, finds that Tayloe does not teach steering transmitted signal beams in the direction of a plurality of mobile transceivers to optimize operation of a wireless network (Ans. 4). Instead, the Examiner finds Borrás teaching this subject matter (*Id.*). We concur that Borrás teaches a telecommunications system having a base station directional controlled antenna for steering transmitted signals into the direction of a

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<sup>4</sup> Appellants group independent claims 1 and 16, and collectively argue patentability (App. Br. 6-11; Reply Br. 2-5). Accordingly, we select independent claim 1 as representative. 37 C.F.R. § 41.37(c)(1)(vii).

portable communication two way radio unit, and that the Borrás system uses determined received signal quality to select a best direction for transmitting signals (FF 3).

Appellants argue (1) “Taylor teaches nothing about dynamically changing the electromagnetic coverage of the network, in a manner similar to Applicants’ invention . . .,” and (2) “Borrás teaches nothing about collecting and analyzing location information from mobile transceivers in a wireless network, in a manner similar to Applicants’ invention . . .” (Reply Br. 4). We are not persuaded by these arguments that separately attack Taylor and Borrás and do not address the combination. See *In re Keller*, 642 F.2d at 426. Further, Appellants’ arguments contend that these reference teachings are dissimilar from “Applicants’ invention,” but Appellants are silent concerning construing the claimed limitations, and how such construed limitations might distinguish over the reference teachings.

With respect to combining the references, Appellants argue that “it is only via hindsight that the Office Action could assert such a combination, or suggest a motivation to combine” (App. Br. 11), and that “it is the Office Action itself that provides the motivation to combine Taylor and Borrás, and that one of ordinary skill in the art would not assert that such a combination teaches or suggests Appellants’ claimed invention” (Reply Br. 5). We conclude that these arguments fail to persuasively rebut the Examiner’s prima facie case of obviousness, a position we find reasonable.

We concur with the Examiner that Taylor teaches a network communications system having a plurality of base stations servicing a plurality of mobile units, and that Taylor also teaches determining locations and resulting signal quality information for the mobile units that are used by

an operator to set system parameters, such as transmitter power (Ans. 3, 4; FF 1). Further we concur with the Examiner that Borrás teaches a telecommunications system that uses a base station directional antenna for steering transmitted signals to a portable communication two way radio unit, and the system uses determined received signal quality to select a best direction for transmitting signals (Ans. 4; FF 3). Consequently, we are persuaded that an ordinarily skilled artisan would recognize from the reference teachings pointed out by the Examiner that Tayloe could be modified by the Borrás directional antenna to accomplish the predictable result of altering transmitter power delivered toward Tayloe mobile units. Both Tayloe and Borrás teach operation of wireless network communication systems, collecting and analyzing system operation information, and adjusting base station transmissions in accord with collated information. Accordingly, we are persuaded that the Examiner's developed record supports modification of Tayloe by Borrás as being a predictable use of prior art elements according to their established functions, which provides adequate rational underpinning to support the legal conclusion of obviousness. *KSR*, 550 U.S. at 417-18.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's rejection of claim 1, and for similar reasons we will sustain the Examiner's rejection of claim 16.

*Claims 3, 12, 13, 18, 27, and 28*

Appellants reiterate the arguments made for claims 1 and 16 by merely separately contending that the rejection of (1) claims 3 and 18, (2) claims 12 and 27, and (3) claims 13 and 28 “stand[s] or fall[s] with independent claims 1 and 16” (App. Br. 11, 13; Reply Br. 5, 7). For the

reasons previously indicated, we are not persuaded by the reiterated argument with regard to Tayloe, Borrás, and claims 1 and 16. This argument also fails to persuasively rebut the Examiner's prima facie case of obviousness – a position we find reasonable.

Accordingly, Appellants have not persuaded us of error in the Examiner's rejection of claims 3, 12, 13, 18, 27, and 28. Therefore, we will sustain the Examiner's rejection.

*Claims 14 and 29*

Appellants also reiterate the arguments made for claims 13 and 28 by merely contending that the rejection of claims 14 and 29 “stand[s] or fall[s] with dependent claims 13 and 28” (App. Br. 13, 14; Reply Br. 8). Appellants' exclusive argument for claims 13 and 28 is that they “stand or fall with independent claims 1 and 16” (App. Br. 13; Reply Br. 7). For the reasons previously indicated, we are not persuaded by the reiterated argument with regard to Tayloe, Borrás, and claims 13 and 28. This argument also fails to persuasively rebut the Examiner's prima facie case of obviousness – a position we find reasonable.

Accordingly, Appellants have not persuaded us of error in the Examiner's rejection of claims 14 and 29. Therefore, we will sustain the Examiner's rejection.

*Claims 15 and 30*

Appellants reiterate the arguments made for claims 14 and 29 by merely contending that the rejection of claims 15 and 30 “stand[s] or fall[s] with dependent claims 14 and 29” (App. Br. 14). Appellants' exclusive argument for claims 14 and 29 is that they “stand or fall with independent claims 13 and 28” (App. Br. 14). For the reasons previously indicated, we

are not persuaded by the reiterated argument with regard to Tayloe, Borrás, and claims 14 and 29. This argument also fails to persuasively rebut the Examiner's prima facie case of obviousness – a position we find reasonable.

Accordingly, Appellants have not persuaded us of error in the Examiner's rejection of claims 15 and 30. Therefore, we will sustain the Examiner's rejection.

*Claims 4 and 19*

Appellants assert that Borrás is deficient in teaching the claimed limitation for collecting information “when certain defined thresholds are triggered” (App. Br. 11). This assertion is directed to the Examiner's acknowledgment that Tayloe does not disclose the disputed information collection limitation, but that Borrás teaches such threshold triggered information collection, “e.g.,[,] handoff; Col. 5:7-29” (Ans. 5, 7).

On this record, we are persuaded that Appellants have shown that the Examiner erred in the rejection under § 103 of claims 4 and 19 over Tayloe and Borrás.

Our reading of Borrás does not concur with the Examiner's - namely that the Borrás “handoff” teachings are in some relevant way pertinent to the disputed limitation. The Examiner does not address what relevance the term “handoff” as taught by Borrás may have to the disputed limitation. We find Borrás teaches that a “handoff” process is used for switching operation of portable communications units between cells or sectors (FF 4). In contradistinction, the disputed limitation covers thresholds for triggering information collection.

For the foregoing reasons, Appellants have persuaded us of error in the Examiner's rejection, and we will not sustain the rejection of claims 4 and 19.

*Claims 5 and 20*

Appellants assert that Tayloe is deficient in teaching the limitation recited in claims 5 and 20 for "dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information" (App. Br. 12). Appellants dispute the Examiner's finding that Tayloe teaches this limitation at column 5, lines 1-5 (Ans. 5, 7), with the assertion that "Tayloe merely refers to a base station commanding a mobile unit to vary its transmission power as it nears the base" (App. Br. 12).<sup>5</sup>

Based on the record, we are not persuaded that Appellants have shown that the Examiner erred in the rejecting claims 5 and 20 under § 103 over Tayloe and Borrás.

Tayloe, we find, teaches more than having base stations command variance in transmission power from mobile units. In particular, we find Tayloe teaches providing a system operator with gathered and analyzed information so that the system operator can accordingly alter base station system parameters, such as transmitter power (FF 1). We conclude that the asserted limitations of claims 5 and 20 read on the Tayloe system operators being presented with gathered and analyzed information so that base station transmitter power can be changed. Appellants have not contended that there

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<sup>5</sup> Tayloe discloses at column 5, lines 1-5, that "... monitoring will reveal the effect dynamic power control has on the various mobile units. Dynamic power control is the ability the base station has to command the mobile unit to vary its transmission power as it nears the base."

is some supported construction for the asserted limitations that would avoid Tayloe teachings for altering transmitter power in accord with analyzed information.

For the foregoing reasons Appellants have not persuaded us of error in the Examiner's rejection of claims 5 and 20. Therefore, we will sustain the Examiner's rejection.

*Claims 6 and 21*

Claims 6 and 21 are respectively dependent from claims 5 and 20, and Appellants assert that Tayloe is deficient in teaching "dynamically assigning RF signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information" (App. Br. 12). Appellants continue by disputing the Examiner's finding that Tayloe teaches this limitation at column 5, lines 1-5, and column 6, lines 9-15 (Ans. 5, 7). Specifically, Appellants assert that "Tayloe merely refers to a base station commanding a mobile unit to vary its transmission power as it nears the base and increasing the transmitter power at a base station to increase the cell coverage area" (App. Br. 12).

Based on the record, we are not persuaded that Appellants have shown that the Examiner erred in the rejecting claims 6 and 21 under § 103 over Tayloe and Borrás.

As addressed *supra*, we find Tayloe teaches providing gathered and analyzed information so that the system operator can accordingly alter base station system parameters, such as transmitter power (FF 1). Consequently, we conclude that the portion of the asserted limitation directing "dynamically assigning RF signal power . . . based on the collected and analyzed information" reads on Tayloe. We concur with Appellants that

Tayloe discloses “increasing the transmitter power at a base station to increase the cell coverage area” (App. Br. 12; and *see* FF 2). Appellants, however, nowhere address the consequence of increased coverage area resulting from increased transmitter power, i.e., changes in delivered RF power *within* irradiated cells, sectors in cells, and mobile transceivers in cells. Accordingly, we conclude that the disputed limitation for “dynamically assigning RF signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information” reads on Tayloe.

For the foregoing reasons Appellants have not persuaded us of error in the Examiner’s rejection of claims 6 and 21. Therefore, we will sustain the Examiner’s rejection.

*Claims 7 and 22*

Appellants assert that Borrás is deficient in teaching the claimed “step of or means for setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information” (App. Br. 12; Reply Br. 6). Appellants continue by disputing the Examiner’s finding that Borrás teaches this limitation at column 5, lines 7 to 29, (Ans. 5, 6). Specifically, Appellants assert that “Borrás merely refers to controlling handoffs by measuring signal quality” (*Id.*). The record, despite Appellants’ argument, we find corroborates the Examiner’s obviousness rejection of claims 7 and 22.

We find, as Appellants argue, that Borrás teaches having portable communication units measure signal quality to control handing off between intra-cells or inter-cells (FF 4). However, we do not concur with Appellants’ implied assertion that this is the sole Borrás teaching concerning



handoffs. Explicitly, we further find from the Examiner's cited Borrás disclosures that the reference teaches sweeping base station directional antennas and having base stations measure resulting received and transmitted signal quality to optimize directional antenna steering and thereby control handoffs (FF 5). Therefore, we find Borrás teaching that handoffs can be controlled either by portable communication units measuring signal quality, or by base station directional antennas being steered in response to measured signal quality to optimize transmissions (FF 4, 5). Accordingly, we deduce that the disputed limitation reads on the Borrás taught control of handoffs using base station measured signal quality to steer and thereby optimize directional antenna transmissions.

For the foregoing reasons, Appellants have not persuaded us of error in the Examiner's rejection of claims 7 and 22. Therefore, we will sustain the Examiner's rejection.

*Claims 8 and 23*

Appellants reiterate their prior argument that "Borrás merely refers to controlling handoffs by measuring signal quality," and, therefore, is deficient as to the claimed "individual mobile transceivers each hav[ing] a unique, assigned HO (handoff) threshold" (App. Br. 12, 13).

As a first matter, claims 8 and 23 are respectively dependent from claims 7 and 22, and, therefore, the doctrine of claim differentiation raises a presumption that claims 8 and 23 cover subject matter of a different scope from claims 7 and 22.<sup>6</sup> Both claims 8 and 23 recite that the "individual

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<sup>6</sup> "The doctrine of claim differentiation 'create[s] a presumption that each claim in a patent has a different scope . . . . The difference in meaning and scope between claims is presumed to be significant [t]o the extent that the

mobile transceivers each have a unique, assigned HO (handoff) threshold.” Accordingly, the claims 8 and 23 covered individual mobile transceivers are presumed to be more narrowly defined from those of claims 7 and 22 by being assigned unique handoff thresholds.

Appellants correspondingly assert that “Borras says nothing about individual mobile transceivers each having a unique, assigned HO (handoff) threshold, in the context where the wireless network sets dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on collected and analyzed location information” (Reply Br. 6). The Examiner merely states that “Borras teaches in an analogous art” the disputed limitation with a citation to “Col. 5: 7- 29” (Ans. 6, 7). Accordingly, we concur with Appellants that Borras is silent as to individual mobile transceivers being assigned unique handoff thresholds.

For the foregoing reasons, Appellants have rebutted the Examiner’s rejection of claims 8 and 23, and we will not sustain the rejection.

*Claims 9 and 24*

Claims 9 and 24 are respectively dependent from claims 8 and 23, and the Examiner substantively repeats the same explanation premised from Borras as also teaching the claims 9 and 24 recited subject matter at column 5, lines 7-29 (Ans. 6, 7). As is addressed *supra*, we concur with Appellants that Borras is silent as to individual mobile transceivers being assigned unique handoff thresholds (Reply Br. 7). For the foregoing reasons,

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absence of such difference in meaning and scope would make a claim superfluous.” *Free Motion Fitness, Inc. v. Cybex Int’l, Inc.*, 423 F.3d 1343, 1351 (Fed. Cir. 2005) (internal quotation marks and citations omitted).

Appellants have also rebutted the Examiner's rejection of claims 9 and 24, and we will not sustain the rejection.

*Claims 10 and 25*

Claims 10 and 25 are respectively dependent from claims 9 and 24, and the Examiner continues in substantively repeating the same explanation premised from Borrás as also teaching the claims 10 and 25 recited subject matter at column 5, lines 7-29 (Ans. 6, 7). As is addressed *supra*, we concur with Appellants that Borrás is silent as to individual mobile transceivers being assigned unique handoff thresholds (Reply Br. 7). For the foregoing reasons, Appellants have also rebutted the Examiner's rejection of claims 10 and 25, and we will not sustain the rejection.

*Obviousness Rejection over Tayloe, Borrás, and Grimes*

*Claims 2 and 17*

Claims 2 and 17 are respectively dependent from claims 1 and 16. Appellants assert that claims 2 and 17 "stand or fall with claims 1 and 16" (App. Br. 14; Reply Br. 9). Appellants further contend that "Grimes does not overcome the deficiencies of Tayloe and Borrás" (Reply Br. 9). For the reasons previously indicated, we are not persuaded by the referenced reiteration of Appellants' argument with regard to Tayloe, Borrás, and claims 1 and 16. This argument also fails to persuasively rebut the Examiner's prima facie case of obviousness – a position we find reasonable.

Accordingly, Appellants have not persuaded us of error in the Examiner's rejection of claims 2 and 17. Therefore, we will sustain the Examiner's rejection.

## CONCLUSIONS

1. Under § 103, Appellants have not shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches steering directional antennas to optimize transmission of signals by using collected and analyzed information, including mobile transceiver location information, in rejecting claims 1, 3, 5-7, 12-16, 18, 20-22, and 27-30.
2. Under § 103, Appellants have not shown that the Examiner failed to provide a reason to combine Tayloe and Borrás in rejecting claims 1, 3, 5-7, 12-16, 18, 20-22, and 27-30.
3. Under § 103, Appellants have not shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches: (i) dynamic allocation of transmitted base station signal power in rejecting claims 5 and 20; (ii) dynamic assignment of transmitted base station signal power to cells, sectors within cells, and mobile transceivers in rejecting claims 6 and 21; (iii) setting dynamic dedicated handoff thresholds for individual mobile transceivers in rejecting claims 7 and 22.
4. Under § 103, Appellants have shown that the Examiner erred in finding that the combined Tayloe and Borrás method and system teaches: (i) use of threshold triggers for collecting information in rejecting claims 4 and 19; (ii) setting unique handoff thresholds for each mobile transceiver in rejecting claims 8 and 23; and (iii) performing handoffs based on assigned unique handoff thresholds

and locations for individual mobile transceivers in rejecting claims 9, 10, 24, and 25.

5. For reasons discussed with regard to claims 1 and 16, Appellants have not shown that the Examiner erred in rejecting claims 2 and 17 as obvious over Tayloe, Borrás, and Grimes.

#### DECISION

We have sustained the Examiner's rejections of claims 1-3, 5-7, 12-18, 20-22, and 27-30. We have not sustained the Examiner's decision rejecting claims 4, 8-10, 19, and 23-25. Accordingly, the Examiner's rejections of claims 1-10, 12-25, and 27-30 are affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

#### AFFIRMED-IN-PART

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